DOCUMENT RESUME

ED 432 227 IR 019 597

AUTHOR	Fahraeus, Eva R.
TITLE	Tutoring Group Learning at a Distance.
PUB DATE	1999-03-00
NOTE	7p.; In: SITE 99: Society for Information Technology & Teacher Education International Conference (10th, San Antonio, TX, February 28-March 4, 1999); see IR 019 584.
PUB TYPE	Reports - Evaluative (142) -- Speeches/Meeting Papers (150)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Computer Mediated Communication; *Cooperative Learning; *Distance Education; Foreign Countries; Group Dynamics; *Group Instruction; high Schools; Inservice Teacher Education; Instructional Effectiveness; Secondary School Teachers; Social Environment; *Teleconferencing
IDENTIFIERS	Sweden

ABSTRACT

Experiences from a distance course conducted during 1996-97 for high-school teachers in Sweden and reports from other experiments have yielded the conclusion that collaborating via electronic conferencing systems demands new communication patterns. This paper uses theories about communication, group processes, and shared symbolic order and social environment to examine what happened, how to solve problems, and how to take advantage of new possibilities. The following hypothesis is formulated: one can improve the efficiency in distance learning by introducing the participants to the special character of electronic conferencing systems communication and group processes; such an introduction ought to be based on the students' experiences and actions. A field experiment conducted during the autumn term of 1998 to test this hypothesis is summarized. (Author/AEF)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☒ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED 432 227

Tutoring Group Learning at a Distance

PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
G.H. Marks
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Eva R Fåhræus
Dep. of Computer and Systems Sciences, Stockholm University/KTH
Electrum 230, S-164 40 Kista, Sweden
E-mail: evafaahr@dsv.su.se

Abstract: Experiences from a distance course conducted during 1996-97 and reports from other experiments have yielded the conclusion that collaborating via electronic conferencing systems demands new communication patterns.

Theories about: (1) communication, (2) group processes, and (3) shared symbolic order and social environment were used to help us understand what happened, how to solve problems, and how to take advantage of new possibilities.

A hypothesis was formulated about how to improve the efficiency in distance learning by introducing the participants to the special character of electronic conferencing systems communication and group processes. During the autumn term of 1998 we are conducting a field experiment that will test this hypothesis.

1. Experiences from a Distance Course

During 1996-97 a distance course was given for 51 high-school teachers about how to use the Internet pedagogically in their teaching at school. This was part of a governmental venture to find ways to support distance education in Sweden. The course ran during half a year and the participants studied part time, parallel with their ordinary full-time work as teachers. This was made possible through a course outline with only two 2-and-a-half day face-to-face meetings, one at the beginning and one at the end. In the meantime, participants communicated with each other and with the teachers through the electronic conferencing system FirstClass for asynchronous text communication. A fuller description of this course is found in [Männikkö & Fåhræus 1997].

The pedagogical model of Problem-Based Learning (PBL) was applied in a flexible way in the course. Ten task groups formed themselves dynamically during the first face-to-face meeting around themes that the participants found interesting. These task groups collaborated during the whole course via the conferencing system, using the system also for delivering reports, asking questions, and discussing general matters around the course.

We were two teachers tutoring five groups each. We tried to check the system for messages at least every other day. Thus we followed the progress of the group work. We avoided intervening in the group discussions and did not answer questions immediately, thus encouraging the participants to help each other. This was in line with the pedagogical model used: to encourage independence from us as tutors.

To collect and systematize experiences from the course we used mainly qualitative methods. The participants were to answer three questionaires, one before the course started, one in the middle, and one at the end of the course. They were asked to keep electronic diaries on their learning process. We collected all communication in the conferencing system and have analyzed part of the very rich material.

As teachers, we felt that this kind of course demands more preparation and more time to read all material produced, compared with a similar type of course, conducted in a traditional way. The fact that all that is "said" in the groups is written and visible to the tutor means that the tutor gets a good picture of the contribution to the group work by each and every participant. But it does not mean that the tutor can activate an inactive group. As earlier mentioned, we did not want to intervene if not necessary. That would have meant that we took the responsibility away from the group members. But when we found that a group did not start to work or that the work stopped, we thought we had to do something. We tried to encourage as soon as there was a sign of action, and we prodded by asking questions about their progress and so on. But still, we saw very little result of these efforts. Inactive groups still did not manage to complete the course assignments.

IR019597

BEST COPY AVAILABLE

2. Some Results from the Communication Analysis

As an illustration, we will show examples below from the electronic records (in translation from Swedish) on which we base our conclusions. The material is excerpted from the conferencing system and illustrates the first month of communication in four of the task groups. The size of the groups were three to five people. Three of the groups were quite active, posting between 24 and 52 contributions during the studied period, whereas one group was rather inactive with only 12 contributions. Four people from these groups left for different reasons the course after one or two months. The rest passed the course, but members in the active groups got higher degrees. More about this material is found in [Fåhræus & Männikkö 1998].

2.1 Action and Reaction Affecting Group Cohesion

We will here give some examples of different action/reaction behaviours that seem to aim at group cohesion. Most messages have an opening and an ending consisting of a *greeting* addressed to the whole group.

Greeting: Hi, everybody!
Greeting: See you!

Sometimes the response greeting addresses a certain person.

Greeting: Hi, Tom, I got your mail!

When a *question* is raised, it is obvious to the recipients that an answer is expected, and they react accordingly.

Question: Is this the most intelligent way of talking?
Answer: There ought to be better ways!

A contribution can be answered with a *question*.

Contribution: Here is the re-written version.
Response: How about adding a reference to the homepage?

But also when a member is suggesting something or contributing in other ways, there is an expectation of some kind of *feedback*, and the feedback can also function as a confirmation of a received message.

Statement: I really hope the file will arrive correctly now.
Response: I've got your file and read it.

Sometimes a statement is an indirect *plea for help*.

Statement: I still don't manage to open files.
Offer of help: When I highlight the attachment and then click Open, I can choose Save.

A statement can also be a *request of response*.

Statement: I think we need to discuss this further.

... or a *promise*.

Statement: I'll try to fix this during the weekend.

Often one person gives a contribution and someone else gives an encouraging *comment*.

Contribution: I've written and sent this text.

Comment: Your text is good.

The communication can also start with an encouraging comment.

Comment: Hello, Tom, great that you put up a homepage!
Response: I did my best.

The respondent often *agrees or disagrees* with the contributor.

Contribution: Not very much result from searching the Net.
Agreement: I've also had problems in finding good material.

The groups differ a lot in what degree members reacted on action from the others in the asynchronous communication. The three active groups in the sample reacted to one half to one third of the cases. Typically, there were one or two active persons in each group giving most of the feedback. Members in the less active group was reacting only to every eighth action.

2.2 Communicating Different Contexts

Characteristic of the communication at a distance is that people are situated in different contexts. The technical environment they work in, their learning situations, social situations, and professional situations vary. Being in different contexts make people place different demands and this can impede contact and make it difficult to understand each other. Therefore, communicating the context can be a means of reaching each other. This is used in the active groups where the members now and then kept telling each other about problems and delights in their everyday life.

About the *professional* context,

Message: I think I mentioned my other project. It's about studying German.

.. and the *social* context

Message: I just came home from a meeting about violence in the neighbourhood.
Response: It really is awful with all this violence. How does it look like where you live?

.. and *technical* context

Message: I got some help from my school and now the system is installed.

In some cases we believe that complaints about technical problems were also messages about higher-level processe and could be called *process-context* messages.

Message: To be a computer user is not easy. It ought to be!

2.3 Synchronous Communication

"On-line chat and even MUD became popular. Several of the task groups established regular chat hours for meetings. This was a way to speed up the decision making process in the task group and also to create effective working routines for the group." [Männikkö & Fåhræus 1998] (P. 675). Especially one group developed an efficient pattern in their chats. At the beginning, the discussion was rather chaotic and mostly dealing with practical things and greetings. Eventually they developed a pattern, giving short messages, mostly about who should do what and when. They even managed to handle parallel threads which you can see in the third chat. Sometimes one person gives two messages after each other concerning different themes, without waiting for a response.

From the first chat:

BEST COPY AVAILABLE

- - -
Linda: I write to see if it works.
Robert: Hi, everybody!
John: This was a good idea!
George: It seems to work!
Linda: This maybe works.
George: Where did you find this function?
- - -

From the second chat:
- - -
Anne: Nice to be with you from the beginning this time! My question is what to do with the suggested homepage.
Robert: If you attach it here I will publish it. Otherwise you can try to follow my instructions.
George: If I understand right Robert has written instructions about how to do.
Anne: I can send in via FirstClass? Or via email?
George: Try ftp!
- - -

From the third chat:
- - -
Robert: What happened to Jack?
Robert: I will copy this conversation.
John: It seems as if Jack quitted.
Robert: I'll ask Tina to take away his access rights in this conference.
John: Does copying mean pasting in a Word document?
John: Did we agree about file format for our text?
Robert: Copying means saving the conversation in our conference. I copy and send via email.
Robert: Word I suggest.
John: Me too (haven't got WP at home)!
- - -

3. Findings about Communication Patterns

There are many conclusions to be drawn from this course and the material collected. In this work, the focus is on one factor: the communication patterns in learning groups.

The analysis of the group communication has shown that the communication patterns were different in the groups. Participants in successful groups gave each other frequent feedback and kept in contact several times a week. Less successful groups communicated either very seldom or in a more individualistic way: One person wrote a contribution; after a while there might be a contribution from someone else but without reference to the former.

The patterns people have developed for face-to-face communication are of little use when communicating only via text in an electronic conferencing system. They may even hinder. The spontaneous and fast feedback we get from face expressions and gestures are not at hand. People try to transfer these to the new medium, e.g. as greetings and smileys. They have, however, to be supplemented by other means. Not all students understand this and, if they do, it might take some time for them to "invent" an effective communication pattern.

The lack of spontaneous feedback is not the only difference between face-to-face communication and via an electronic conferencing system. The time lag and the conservation of the written words are other factors that induce new communication patterns.

4. Theories that May Help Us Understand

4.1 Communication Theory

BEST COPY AVAILABLE

With a humanistic perspective we regard communication as a tool to construct meanings. When we interact face to face, we use a broad repertoire of signals; and interlocutors impact on each other's behaviour on many levels. "Countless generations have enabled us to respond promptly (and generally quite accurately) to the affordances offered, say, by a ripe apricot, a girl's smile, or a seat in the shade on a hot day" [Mantovani 1996]. Using technical media for this interaction narrows the repertoire. We need new models to interpret this new environment.

In order to deal with their assignments in due time, the task groups of our course had to start an effective communication in one or two months. This is a short period to develop a new pattern of communication. Some of the participants had some practice of electronic communication when the course started and there is reason to believe that those helped the others. Participants in successful groups gave each other frequent feedback and referred to other's contributions.

4.2. Group Processes

Groups collaborating with a common task usually pass through similar stages. Five stages can be described in the following manner [Wendelheim 1997] (Pp. 16-17):

- *The initial stage* is focused on issues of *membership*. This is when group members try to find out how to behave in the group in order to be accepted by other group members and by a leader. The interaction is tentative and polite. There is much ambiguity and anxiety about goals and procedure. "Thus, of primary importance during this stage are the individual members' inclusion needs."
- *The second stage* is reached when the group is faced with issues that require distribution of *influence* among group members. Conflicts can arise when interpersonal dominance and competition are handled. According to the theories, these early conflicts are important for the group to develop stability, openness, trust, and cohesiveness.
- *The third stage* can be characterised as a period of *openness*, integration, and trust. Members exchange feedback, ideas, opinions, and feelings and maintain an appropriate balance between concern for task performance and relationships among members.
- *The fourth stage* is when *task performance* is in focus. When the group has reached this stage it has the capacity to function fully as a cohesive work group, committed to the task.
- *The fifth stage* is the final one when roles and tasks are *terminated*.

There were signs in our material that the active groups had passed the first two stages during the first face-to-face meeting. This means that they entered the distant phase with open minds and as rather integrated groups. After a short planning process they started to work with their tasks. The less active group was still mainly struggling with questions about membership and influence [Fåhræus & Männikkö 1998].

4.3. Shared Symbolic Order and Social Environment

"Symbolic order, if it is not shared, cannot ensure the intelligibility and reciprocity of actors' conduct. Conversely, when symbolic order not only functions properly but is also enhanced in its role as map of social and physical environments, communication and cooperation among actors are greatly facilitated" [Mantovani 1996] (P. 55).

If members of a group belong to the same culture and use the same symbolic frame, they usually manage to interpret each other's messages. [Mantovani 1996]. But different symbolic orders can lead to problems.

The meaning of the conferencing system as a place for collaboration and communication was not quite obvious and self-evident to the participants in our course. It had to be negotiated and exemplified through the behaviour of the members [Harrison & Dourish 1996] [Männikkö & Fåhræus 1997].

5. Conclusions about Efficient Communication

1. Collaborating via electronic conferencing systems demands new communication patterns.

2. When collaborating via electronic conferencing systems for the first time, most students do not use an efficient communication pattern.
3. Until it has passed the stages 1, 2 and 3 in the described model a group does usually not collaborate efficiently.
4. Students are seldom aware of stages in group processes.
5. There ought be a means to help students to learn a communication pattern that works in electronic conferencing systems and to take advantage of the group process.

The following hypothesis is formulated:

One can improve the efficiency in distance learning by introducing the participants to the special character of electronic conferencing systems communication and group processes. Such an introduction ought to be based on the students' experiences and actions.

6. Field Experiment to Test the Hypothesis about Introduction

During the autumn of 1998 a field experiment was conducted to test the hypothesis about an introduction. This was done for a distance course called "People, computers, and community", which is using an electronic conferencing system as communication medium.

At the beginning of the course, 50% of the students were offered a three hours' introduction about how to communicate electronically. Participants were divided into groups of three. One was a sender, the second participant was a receiver and the third one was an observer. Each of them got secret instructions. The sender was supposed to try to get the receiver interested in joining a club. The receiver should play a role: Either "the interested listener", "the sceptical", or "the uninterested receiver of the information". The objective of this excercise was to let the paricipants experience how difficult it is to communicate, if you do not give and get feedback.

After the excercise, we had time for reflection and discussion with all the participants about the means of giving feedback in an electronic conferencing system and the consequences of that. We also discussed group processes, and how they might influence the work in the task groups, communicating at a distance.

The students were asked to answer questionnaires about how they have experienced their own and their peer students' communication. The communication in the task groups was saved electronically and will be analyzed in 1999 in order to find out what effect the introduction had, if any.

7. References

[Fåhræus & Männikkö 1998] Fåhræus, E. R. & Männikkö, S. (1998) Closer at a Distance: Learning via Conference Systems. *"Collaborate '98"*: National Advisory Committee on Computing Qualifications, 11th Annual Conference,1998, Auckland, New Zealand. 127-136.

[Harrison & Dourish 1996] Harrison, S. & Dourish, P. (1996). Re-Place-ing Space: The Roles of Place and Space in Collaborative Systems. *ACM Conference on CSCW*, Boston, USA. 67-76.

[Mantovani 1996] Mantovani, G. (1996). *New Communication Environments. From Everyday to Virtual*. Taylor & Francis, London.

[Männikkö & Fåhræus 1997] Männikkö, S. & Fåhræus, E., (1997) Creating Places For Teaching and Learning. *14th International Conference on Technology and Education, 1997*, Oslo. URL: http://www.dsv.su.se/~evafaahr/ CP.html

[Männikkö & Fåhræus 1998] Männikkö, S. & Fåhræus, E., (1998) "Are you Still There?!" About Mediated Communication in Teaching and Learning. *Teleteaching '98, Distance Learning, Training and Education, XV. IFIP World Computer Congress 1998*, Vienna and Budapest. Pp. 667-678.

[Wendelheim 1997] Wendelheim, A. (1997). *Effectivness and Process in Experiential Group Learning*. Department of Psychology, Stockholm University.

BEST COPY AVAILABLE